



2020 Listing Methodology Public Meeting Summary
February 22, 2019
Lewis and Clark State Office Building
Jefferson City, Missouri

- Recent changes to the 2020 Listing Methodology Document (LMD) were discussed, including minor grammatical and formatting changes as well as the addition of Appendix F, which is the Nutrient Implementation Plan.
- The addition of a footnote under section III. Biological Data of the 2020 LMD was added to clarify that biological criteria is referred to throughout the document but numeric scores are not specifically stated in Missouri's current Water Quality Standards (WQS). WQS 10 CSR 20-7.031 5 (R) specifically defines biological criteria as "The biological integrity of waters, as measured by lists or numeric indices of benthic invertebrates, fish, algae, or other appropriate biological indicator shall not be significantly different from reference waters." The LMD outlines what numeric criteria or indices will be used and how those numeric criteria or indices were developed.
- Information was added to clarify size classification in relation to Warm Water, Cool Water, and Cold Water stream habitats after the 2014 revision of Missouri's WQS. A visual representation was also inserted to depict the size classification between headwater streams and rivers, which respectively determines biological criteria applied during assessments.
- Wording was removed in order to delineate the difference between "control" and "reference" streams, thus making it clearer as to which is being discussed within the 2020 LMD.
- It was reiterated that the 13 Step Process is currently being used as an interim guideline to define candidate reference streams until a robust dataset for headwater stream criteria is developed by the Missouri Department of Natural Resources.
- Single stressors will not solely eliminate a stream from consideration as a candidate reference stream. An aggregate of stressors, land use calculations, and permitting information followed by field verification will be used for determination.
- If available, historical data will be considered; if an issue has been rectified it will not disqualify a stream from consideration as a candidate reference stream. If historical data is unavailable for comparison, then a potential candidate stream will be subject to WQS prior to inclusion.

- What is currently Step 7 used to be Step 10 in the interim 13 Step Process, and staff also pointed out that not only will the Ecological Drainage Unit (EDU) be utilized, but the Aquatic Ecological System (AES) will be used when determining potential reference streams. Stakeholders noted utilizing the AES might weaken expectation set forth for identifying candidate reference streams, therefore promoting further habitat degradation. Staff explained usage of AES' for determination of potential reference streams to accurately compare streams of similar geology and land use prior to searching the broader EDU. It was requested by stakeholders this process be clarified in text within the 2020 LMD.
- Stakeholders expressed concern that wording in the 2020 LMD was too vague regarding the number of macroinvertebrate sampling events that would take place when creating headwater stream criteria.
- References were inserted to the 2020 LMD where necessary.
- Page 57, Appendix B, chronic pH criteria was updated to reflect current WQS. On page 58 clarification was made to the Lake Nutrient Criteria. Appendix D, Ecoregional Criteria of Lakes, was added to the 2020 LMD, and in the next LMD the assessment pieces of the Nutrient Implementation Plan will be integrated.
- Stakeholders and staff reviewed the monitoring and assessment portion of the Nutrient Implementation Plan, located in Section I. The Department is open to discussion on how to assess and monitor lake trends.
- The Department is also taking suggestions for topics to be considered for the 2022 LMD.
- The next 2020 LMD Public Meeting is from 1:00 p.m. to 4:00 p.m. on March 15, 2019, at the Lewis and Clark State Office Building, Gasconade Camp Conference Room. Public comment period for the 2020 LMD ends April 3, 2019.